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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/238,790      01/28/99      ELIZONDO      E      M-6353-HST-C

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IM22/0929

EXAMINER

GAKH, Y

ART UNIT

PAPER NUMBER

1743

3

DATE MAILED:

09/29/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

**Office Action Summary**

Application No.

09/238,790

Applicant(s)

ELIZONDO ET AL.

Examiner

Yelena G. Gakh

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claims 1-20 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some \* c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) \_\_\_\_.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

**Attachment(s)**

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-16, drawn to a method for measuring the concentration of boron in a bodymaker coolant, classified in class 436, subclass 60.
- II. Claims 17-20, drawn to a composition useful as an interference-preventing-acidulant, classified in class 424, subclass \*\*\*.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions of I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)).

In the instant case a composition recited in claims 17-20 consisting of a component (A) selected from the Markush group of malic acid, tartaric acid, and citric acid, and a component (B) selected from the Markush group of ethylene glycol, propylene glycol, ethylene diamine, propylene diamine, ethanol amine, propanol amine, and 8-hydroxyquinoline can be used not only as an interference-preventing-acidulant, but also as an antibiotic (Cheredanova et al., RU 2,071,477), macrobiotic (Tanaka et al., JP 406199602A), etc.

3. Because these inventions are distinct for the reason given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Mr. Wisdom on September 13, 2000 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-16. Affirmation of this election must be made by applicant in replying to this Office action. Claims 17-20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 1-16** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites “a third mixture having a pH value” (step (IV), second line) without specifying any pH value. The pH value is defined only when evaluating a total amount of neutral boric-acid-freeing-substance (step IV, (1), (2)). Also, it is not clear how the amount of the substance can have properties (claim 1, lines 32-33).

The term “optionally” used in claim 1, step (II) (A), is indefinite, since it introduces a narrow range of limitations into a broad range of limitations in the same claim. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

The term “precisely measured” used in claim 1, step (VI) lacks sufficient antecedent basis since it was never defined before.

The language of the claim 1 is very verbose and includes information that is not needed for a clear understanding of invention. Especially, the step (V) sounds very cumbersome, with a procedure described there being just a titration.

**Claims 13 and 15** recite Markush group consisting of just one element: “a component (B) that is selected from the group consisting of molecules that each contain two distinct moieties”. There is no listing of the elements of the Markush group.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. **Claims 1-11** are rejected under 35 U.S.C. 102(b) as being anticipated by Negina et al.

Claims 1-11 disclose a method for measuring the concentration of a bodymaker-lubricant-as-prepared that includes boric acid-amine complex, by mixing of a sample of a lubricant with citric acid and, optionally, water and/or an organic compound described in the claim 1, step II (B), an alkali metal or alkaline earth metal hydroxide to form a mixture with pH at least 6.5, one of the three compounds of the Markush group: mannitol, glycerol, and sucrose to lower pH of the previous mixture for at least 0.5, titration of the mixture obtained with the standard solution of hydroxide ions, and, finally, calculation of the concentration of boron by a standard procedure from the amount of NaOH.

Negina et al. describe potentiometric determination of boron in an oxidizing medium by adding 10 ml of 5% citric acid to an aliquot containing 5-10 mg boron (which lowers pH of the solution by 0.3-0.7 pH units, see Karazhanov et al.), 6N NaOH to neutralization at pH 6.9, 50 ml of saturated mannitol solution, and H<sub>2</sub>O. The mannitol-H<sub>3</sub>BO<sub>3</sub> solution is then titrated potentiometrically with 0.1N NaOH to pH 6.9. The relative error in determination of 5 mg boron in the presence of 35 mg of a mixture of the impurities was less than or equal to 1%. This teaching of Negina et al. anticipates the subject matter of the claims 1-11.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

Art Unit: 1743

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Negina et al. For a teaching of Negina et al., see previous paragraphs in this office action. Claim 12 recites that the pH value of the second mixture obtained in the step (III) of the claim 1 is from about 7.1 to about 8.2. Negina et al. disclose that the pH value of the similar mixture obtained by mixing boron, citric acid, and NaOH, is 6.9. However, it would have been obvious for a person of ordinary skill in the art to adjust the pH of the mixture taught by Negina et al., to a value of 7.1 since pH is a result effective parameter which can be easily determined and adjusted depending upon the user's particular preferences and the objectives sought.

#### *Allowable Subject Matter*

12. **Claims 13-16** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

None of the prior art of record teaches or fairly suggests using magnesium containing biocide and 8-hydroxyquinoline in a specific ratio with citric acid.

### *Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sluhan (US 3,750,847) describes water-soluble triethanolamine borate and diethanolamine borate used as lubricants in aqueous cutting fluid for machine tools. Adams (US 3,912,643) describes lubricant containing neutralized alkali metal borates when sufficient acid anion is used to bring the pH of an aqueous solution into the range of 6 to 8, preferably 6.5 to 7.5. Yabe (4,204,259) describes automatic apparatus for continuous determination of boron and lithium concentrations when "a mannitol or other polyvalent alcohol solution is added with a certain mixing ratio to the boric acid water sample to form a boric acid-mannitol complex" (p. 1, third paragraph). Young (US 5,266,493) discloses a method of monitoring boric acid in fluid systems using a signature chemical, and also mentions "known in a technical field the mannitol titration method" (p.2, l. 17). Nittel et al. (US 5,584,945) disclose a lubricant carrier salt for facilitating the cold forming of a workpiece of iron or steel, based on boric acid and/or alkali borate which additionally contains aliphatic di- or tri-carboxylic acid, which either is unsubstituted or substituted by at least one OH group and/or its alkali salts, the weight ratio of boric acid/alkali borate (calc. as  $H_3BO_3$ ) to carboxylic acid (calc. as citric acid) is 5-15:1.

Reti et al. (ref. W) describes two methods developed for the determination of borates in deep water, which include adjusting pH, adding mannitol, and titrating with  $OH^-$  solution. Fodor (ref. X) describes determination of boron oxide in silicates by fusing the sample with  $Na_2CO_3$ , dissolving in  $H_2SO_4$ , treating the solution with citric acid, neutralizing it to pH 6.9, adding mannitol and titrating solution with 0.1 M NaOH until pH is 6.9.  $B_2O_3$  was calculated "in the usual way from the volume of NaOH. The method was tested on international NBS standards. The std. deviation was  $\pm 1.3\%$ ".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yelena G. Gakh whose telephone number is (703)306-5906. The examiner can normally be reached on M-F (9:00 a.m. - 5:30 p.m.).

Art Unit: 1743

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (703)308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-5408 for regular communications and (703)305-3899 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

Yelena G. Gakh

September 26, 2000

*Maureen M. Wallenhorst*  
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